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21 UNITED STATES DISTRICT COURT
22 NORTHERN DISTRICT OF CALIFORNIA
23 SAN FRANCISCO DIVISION

24 ORACLE AMERICA, INC.
25 Plaintiff,
26 v.
27 GOOGLE INC.
28 Defendant.

Case No. CV 10-03561 WHA
**ORACLE'S MOTION IN LIMINE #3
REGARDING DR. ASTRACHAN**
Hearing: April 27, 2016 at 8:00 a.m.
Dept.: Courtroom 8, 19th Floor
Judge: Honorable William H. Alsup

NOTICE OF MOTION, MOTION, AND STATEMENT OF RELIEF SOUGHT

2 TO ALL PARTIES AND THEIR COUNSEL OF RECORD: PLEASE TAKE NOTICE
3 that the following Motion *in Limine* Regarding Dr. Astrachan will be heard on April 27, 2016, at
4 8:00 a.m., or as soon thereafter as counsel may be heard, in Courtroom 8, 19th Floor of this
5 Court, located at 450 Golden Gate Avenue, San Francisco, California, the Honorable William
6 Alsup presiding.

7 Plaintiff Oracle America, Inc. will, and hereby does, move this Court to exclude portions
8 of the opinions and testimony of Defendant Google Inc.’s technical expert Dr. Owen Astrachan
9 on each of the four fair use factors and thus to preclude Google from presenting evidence or ar-
10 gument on transformation and commerciality on factor one of fair use. This Motion is based on
11 this Notice of Motion and Motion; the Memorandum of Points and Authorities below; the materi-
12 als attached to the Declaration of Andrew D. Silverman (cited hereinafter as “Ex. __”) that are
13 being filed herewith; the record in this matter; and such other and further papers, evidence, and
14 argument as may be submitted in connection with this Motion.

Dated: March 23, 2016

Orrick, Herrington & Sutcliffe LLP

By: /s/ Annette L. Hurst
Annette L. Hurst

Counsel for ORACLE AMERICA, INC.

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MEMORANDUM OF POINTS AND AUTHORITIES

INTRODUCTION

Google offers Dr. Astrachan as its sole expert in support of its affirmative fair use case.

4 Dr. Astrachan’s opinions are largely inadmissible under *Daubert* and its progeny and should be
5 excluded from trial. Like Google’s other experts, Dr. Astrachan seeks to re-write Android’s actu-
6 al history through a complex counterfactual market that does not exist. Moreover, Dr. Astra-
7 chan’s opinions confirm that Google has no answer to the Federal Circuit’s holdings on factors
8 one and four, the most important fair use factors. Dr. Astrachan ignores and contravenes critical
9 holdings of the Federal Circuit at almost every turn.

10 Specifically, Dr. Astrachan offers inadmissible opinions on each of the fair use factors:

- Dr. Astrachan erroneously contends that Android is transformative (under factor one) because of changes Android made *to the market*, rather than changes Android made *to Oracle's copyrighted material*, as the Federal Circuit requires. Yet he readily concedes under the proper transformative test that Google did nothing to transform the Java APIs;
- Dr. Astrachan's actual test for transformation under factor one has never been articulated by a court and goes against the Federal Circuit's specific guidance;
- Dr. Astrachan opines for purposes of factors two and three, contrary to the Federal Circuit's and this Court's findings and his own prior testimony, that Google *had no choice* but to copy Oracle's Java APIs verbatim to use the Java language; and
- Although Dr. Astrachan is a technical expert, trained in computer science, with no background in economics or market analysis, he opines for factor four on actual market harm and constructs a complicated counterfactual that any economist would find challenging.

19 Dr. Astrachan's unreliable and misleading opinions on fair use should be excluded under
20 Federal Rules of Evidence 401, 402, 403, 702, and 703.

I. GOOGLE SHOULD BE PRECLUDED FROM INTRODUCING EVIDENCE OR ARGUMENT ON FACTOR ONE COMMERCIALITY OR TRANSFORMATION IN LIGHT OF ADMISSIONS BY DR. ASTRACHAN AND GOOGLE

23 Fair use factor one includes “two sub-issues: (1) whether and to what extent the new work
24 is transformative, and (2) whether the use serves a commercial purpose.” *Oracle Am., Inc. v.*
25 *Google Inc.*, 750 F.3d 1339, 1374 (Fed. Cir. 2014) (quotation marks omitted). Google “admitted-
26 ly copied … for what were purely commercial purposes,” leaving only transformation for resolu-
27 tion on remand. *Id.* at 1376. Google also concedes the elements of non-transformation through
28 its own direct statements, confirmed by Dr. Astrachan. *Infra* at 2. With no evidence supporting

1 either component of factor one, Google should be precluded from confusing the jury with self-
 2 contradicting arguments and opinions based on an incorrect and misleading standard.

3 “[U]nder a correct application of the law,” *id.* at 1376, “[a] work is not transformative
 4 where the user ‘makes no alteration to the *expressive content or message* of the *original* work,’”
 5 *id.* at 1374 (quoting *Seltzer v. Green Day, Inc.*, 725 F.3d 1170, 1177 (9th Cir. 2013)). *Accord*
 6 *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 579 (1994) (the critical inquiry is “whether the
 7 new work merely supersedes the objects of the original creation or instead adds something new
 8 ... *altering the first* with new expression, meaning, or message”) (*quoted in part by Oracle Am.*,
 9 750 F.3d at 1374).¹ In the software context, “transformative” means changes to the expressive
 10 content of the *original* software. Merely adding the original work to a larger new work is not
 11 transformative because it makes no change to the *original*. *See Micro Star v. Formgen Inc.*, 154
 12 F.3d 1107, 1113 (9th Cir. 1998) (adding existing computer files into a larger work without alter-
 13 ing originals “can hardly be described as transformative; anything but”); *Wall Data Inc. v. L.A.*
 14 *Cnty. Sheriff’s Dep’t*, 447 F.3d 769, 778 (9th Cir. 2006) (making “exact copies of [plaintiff’s]
 15 software” and “put[ting] those copies to the identical purpose as the original software ... cannot
 16 be considered transformative”); *Storm Impact v. Software of the Month Club*, No. 95 C 2154,
 17 1997 WL 566378, at *5 (N.D. Ill. Sept. 8, 1997) (combining two copyrighted programs with other
 18 programs is not transformative; the only thing “new is the compilation, not the individual works
 19 ... [the original] programs have not been transformed”). The relevant inquiry under the proper
 20 legal standard is changes made to the *expression* of the *original material copied*.

21 Dr. Astrachan expressly admits that the declaring code and structure, sequence, and organ-
 22 ization that Google copied do the *same thing* in Android as they do in Java: “[T]he Java APIs
 23 serves the purpose of helping the user understand and use the software in the Java platform, it al-
 24 so, *to that same extent*, helps the user understand and use the software in the Android platform.”
 25 Ex. 24 (Astrachan) 78:6-22 (emphasis added); *see id.* at 163:19-164:1 (“Google used ... the same
 26 structure, sequence, and organization” of the copied Java API packages).

27
 28 ¹ Emphasis added unless otherwise indicated.

1 Google agrees: “Q: And do you believe that the method declarations used in the Java
 2 classes in Android are used for the same purpose in Android as they are in the Java platform? ...
 3 A: I believe so I can’t recall any instances where that wouldn’t be the case.” Ex. 25 (Ghu-
 4 loum 30(b)(6)) 187:19-188:1; *accord* ECF No. 1017 (Jury Instr. 2012) ¶ 19 (“Google agrees that
 5 it uses the same names and declarations,” and “Google agrees that the structure, sequence, and
 6 organization of the 37 accused API packages in Android is substantially the same”). Thus, the
 7 Court will instruct the jury: “[A]ll agree and it has been established that the Android versions at
 8 play ... use[] the copyrighted declaring code and the structure, sequence, and organization of the
 9 37 Java API packages at issue.” ECF Nos. 1488 (Tentative Trial Plan), 1506 (Follow-On Order).

10 Dr. Astrachan gives no room for Google to take another position, as he failed to consider
 11 the Federal Circuit’s opinion, and consequently applied analyses incompatible with the appellate
 12 court’s specific guidance on transformative. Ex. 24 (Astrachan) 44:23-25 (“I read the Federal
 13 Circuit opinion. But in creating my reports I based my reports on my discussions with counsel on
 14 what fair use was.”). Specifically, he failed to account for the Federal Circuit’s holding that
 15 Google “overstate[d]” what is transformative on appeal by arguing that Android is transformative
 16 “because [Google] wrote its own implementing code, created its own virtual machine, and incor-
 17 porated the packages into a smartphone platform.” *Oracle Am.*, 750 F.3d at 1376. Now on re-
 18 mand, Dr. Astrachan improperly opines that each criticized theory supports fair use:

- 19 • Android “transformed the declaring code by associating it with new implementing code,”
 Ex. 3 (Astrachan Reply Rpt.) ¶ 10;
- 20 • “[W]hen Android was still using the Dalvik virtual machine, [it] was optimized for mobile
 devices in a way in which the Java virtual machine never had been,” *id.* ¶ 16;
- 21 • Non-infringing APIs and libraries in Android are transformative because they are targeted
 for smartphones, Ex. 1 (Astrachan Op. Rpt.) ¶¶ 135-141;
- 22 • Android transformed the smartphone *market*, *id.* ¶¶ 142-153; and
- 23 • Google transformed *the promotion of a smartphone operating system* by giving Android to
 the OEMs for free instead of selling them, *id.* ¶¶ 145-149.

24 Dr. Astrachan strayed even farther from the proper standard by applying a heretofore un-
 25 recognized “new horizons” test, which allowed him to find transformation even when there was
 26 no change to the expression or message of the copied Java API packages:
 27

1 I did *not* apply a specific test, but rather tried to understand this use as *very similar to, in which case it wouldn't be transformational, or very different from an* “**opening new horizons**” as it were. And those are words that I'm using now to try to convey the kinds of things I thought about in indicating that I believe this is transformational.

2
3 Ex. 24 (Astrachan) 163:6-10. Dr. Astrachan's proffered opinions are based on a fundamental
4 misunderstanding of the applicable legal standards and will, if anything, only mislead the jury
5 about the proper inquiry. *Jinro Am. Inc. v. Secure Invs., Inc.*, 266 F.3d 993, 1004 (9th Cir. 2001)
6 (special care must be taken with respect to expert testimony “as the opinion of a purported ‘ex-
7 pert’ ... [is] likely to carry special weight with the jury”); *see also Virnetx, Inc. v. Cisco Sys., Inc.*,
8 767 F.3d 1308, 1328 (Fed. Cir. 2014) (reversing admission of expert testimony that was contrary
9 to settled law). Google may not evade its prior concessions or introduce evidence and argument
10 contradicting them via Dr. Astrachan. With no admissible expert opinion, and blocked by its pri-
11 or admissions, Google should be precluded from arguing that factor one weighs in its favor.

12 **II. DR. ASTRACHAN OPINES, CONTRARY TO THE FEDERAL CIRCUIT’S
13 HOLDING, THAT GOOGLE HAD TO COPY ORACLE’S JAVA API PACKAGES**

14 The Federal Circuit held that Google was *not* forced to copy the 37 API packages in order
15 to use the Java language:

- 16 • “Indeed, the court found that ... ‘*nothing* in the rules of the Java language ... *required* that
17 Google replicate the same groupings,’” 750 F.3d at 1361 n.7 (quoting ECF No. 1202 at 37).
- 18 • “[A]s the court acknowledged, *nothing* prevented Google from writing its own declaring
19 code, along with its own implementing code, to achieve the same result,” *id.* at 1361;
- 20 • “[I]t is undisputed that ... Google did *not* need to copy the structure, sequence, and organi-
21 zation of the Java API packages to write programs in the Java language,” *id.* at 1365; and
- 22 • “As the district court acknowledged, Google could have structured Android differently and
23 could have chosen different ways to express and implement the functionality that it copied.
24 Specifically, the court found that ‘the very same functionality could have been offered in
25 Android without duplicating the exact command structure used in Java.’ The court further
26 explained that Google could have offered the same functions in Android by ‘rearranging the
27 various methods under different groupings among the various classes and packages.’ ...
28 [T]he declaring code could have been written and organized in any number of ways and still
have achieved the same functions,” *id.* at 1368 (quoting ECF No. 1202 at 6-7).

29 These findings were essential to the Federal Circuit’s holdings rejecting Google’s merger
30 and “method of operation” arguments. *Id.* at 1361 (rejecting merger because “nothing prevented
31 Google from writing its own declaring code”); *id.* at 1365 (rejecting Google’s method-of-
32 operation argument, in part, because “Google did not need to copy the structure, sequence, and
33

1 organization of the Java API packages to write programs in the Java language”). Similarly, the
 2 Federal Circuit held that “Google designed Android so that it would *not* be compatible,” *id.* at
 3 1371, precluding Dr. Astrachan from arguing that Android and its apps are compatible or interoperable
 4 with the Java platform or that Google’s motivations were anything but commercial. *Id.* at
 5 1376 (“Google … admittedly copied … for … *purely commercial* purposes”).

6 On remand, Oracle’s expert Dr. Schmidt confirmed that of the thousands of declarations
 7 copied by Google, only 62 declarations are required by a technical constraint of the Java *lan-*
 8 *guage*. Schmidt 3d Rpt. ¶¶ 71-72. Dr. Astrachan was asked if the analysis was complete, and he
 9 had nothing more to add: “Q: … I’m asking you if there – as you sit here today, can you identify
 10 anything specific in the Java API that is constrained by the language that is not expressed in that
 11 chart? A: No, I can’t give you any of that information today.” Ex. 24 (Astrachan) 158:13-20;
 12 *accord* Tr. 2220:1-7 (Astrachan) (“I can only tell you [picking the 37 API packages] was *not a*
 13 *requirement of the Java programming language.*”). Dr. Astrachan agrees that Android is neither
 14 interoperable nor compatible with the Java SE platform. Ex. 2 (Astrachan) ¶ 149 (“Android never
 15 tried to implement or be compatible with any full Java specification”); *id.* ¶¶ 165-67 (“I
 16 agree that bytecode designed for Android will not work on the Java SE platform and vice versa ...
 17 even if Android had implemented all of the Java APIs in the Java SE API Specification”).

18 Despite these findings and admissions, Google offers the opinions below from Dr. Astrachan
 19 on factors two (nature of the work) and three (amount and substantiality of portion taken),
 20 all of which contradict the Federal Circuit’s decision and risk that the jury will be misled into
 21 thinking that Google could not use the Java language without copying the 37 Java API packages
 22 and/or that Android is compatible or interoperable with the Java platform:

- 23 • “[T]he 37 Java SE API packages are integral to the Java programming language and accord-
 24 ingly *necessary* to make effective use of the Java *programming language*,” Ex. 3 (Astrachan
 25 Reply Rpt.) ¶ 24;
- 26 • “When Google chose the Java programming language ... certain things *naturally flowed*
 27 from that decision—*including using the method declarations* from the Java APIs,” Ex. 1
 28 (Astrachan Op. Rpt.) ¶ 162;
- 29 • “[T]he names and parameters of the APIs *must be the same* for many reasons ... the Android
 30 platform is compatible with and *provided the functionality* of the Java *language* APIs at issue,
 31 and *necessarily uses the same API names and organization* in order to do so,” *id.* ¶ 225;

- “[E]ach implementation must include exactly the same method declaration, including all of the elements of the declaration, ... in order to be *compatible*,” *id.* ¶ 225;
- “In the Oracle JDK 1.5 implementation on the right, the first part of the first line of the implementation is the same as the Android implementation on the left Again, this similarity is *required* for *compatibility*,” *id.* ¶ 237;
- “The method name, return type, and parameter type ... are again identical, as they *must be* for *compatibility and interoperability*,” *id.* ¶ 239, and
- “[O]ne small portion, [the declaring code] which is *required to be the same* for purposes of *compatibility and interoperability*,” *id.* ¶ 249.

Google should not be allowed to offer such confusing and misleading testimony when the Federal Circuit held that Google was *not forced* by the Java language to copy the API packages.

In the same vein, Dr. Astrachan and Google should be precluded from claiming that the copied declaring code and structure, sequence, and organization are anything but a computer program. In his 2011 deposition, Dr. Astrachan claimed that APIs are an abstraction and/or not software over 35 times, and made the same point at trial, Trial Tr. 2102:8-11. But up until his March 2016 deposition, he did not even know that the Copyright Act defines “computer program.” Ex. 24 (Astrachan) 68:13-22. It does. 17 U.S.C. § 101. When given the statutory definition for the first time, Dr. Astrachan acknowledged that “it would allow the method declarations to be encompassed” as a computer program, thus making them copyrightable. *See* Ex. 24 (Astrachan) 67:21-25. Not surprisingly, Dr. Astrachan “do[es]n’t recall applying this definition in trying to understand how the Java API works with respect to the copyright issues.” *Id.* 69:4-69:7; *see also id.* 70:1-7 (“Q: Would it be fair to say that counsel for Google never pointed this definition for you and asked that you explicitly to take it into account? A: I don’t remember such a direction from counsel.”). The impact of Dr. Astrachan’s failure to acknowledge the law is profound, as his entire copyrightability analysis in the first trial was based on the incorrect definition of “computer program.”

III. DR. ASTRACHAN IS NOT QUALIFIED TO OPINE ON ECONOMIC MATTERS AND OFFERS NO ECONOMIC ANALYSIS

It is well-established that “an expert can offer an opinion” only “so long as … [it] has a reliable basis in the knowledge and experience *of his discipline.*” *Jinro*, 266 F.3d at 1004 (quotation marks omitted). Unqualified, speculative “expert” testimony is regularly excluded as unreliable.

1 able under *Daubert*. See, e.g., *Rambus Inc. v. Hynix Semiconductor Inc.*, 254 F.R.D. 597, 604
 2 (N.D. Cal. 2008) (precluding technical expert with 33-years business experience from opining on
 3 economic concepts); *accord Vizio Inc. v. Gemtek Tech. Co.*, No. SACV 13-160-JLS, 2014 WL
 4 10538995, at *8 (C.D. Cal. Aug. 27, 2014) (precluding computer scientist with 35 years practical
 5 business experience from opining on economic concepts); *Abaxis, Inc. v. Cepheid*, No. 10-CV-
 6 02840-LHK, 2012 WL 2979019, at *4 (N.D. Cal. July 19, 2012) (expert in pharmaceutical tech-
 7 nology not qualified to testify about a product's commercial success because he had no qual-
 8 ifications in "sales, marketing, or consumer preferences and demand").

9 Factor four is about harm to the actual or potential market for or value of the original
 10 work. 17 U.S.C. § 107(4). Dr. Astrachan is not qualified to opine on factor four because he is a
 11 computer science academic with no claim to specialized knowledge or training in economics:

- 12 • "I do not think of myself as an expert in *economics* I would not consider myself an ex-
 13 pert in the knowledge of *product markets* I am not an expert [in *consumer demand*] in
 the same way I am in my computer science and software field, no," Ex. 24 46:1-15;
- 14 • Nor does Dr. Astrachan have any commercial experience related to software: "Q: You've
 15 never really worked in the software industry, have you? ... A: If – if what working in the
 software industry means, did I create software in a commercial setting, then the answer is
 no," *id.* 127:16-21; and
- 16 • When asked, Dr. Astrachan contended that he offers no opinion on market harm: "I don't
 17 think [harm to Sun/Oracle is] part of my analysis," *id.* 182:1-10.

18 Yet Dr. Astrachan repeatedly offers economic conclusions in his prepared reports, which
 19 he readily conceded in his deposition are not based on *any* expertise or economic analysis:

- 20 • **Compare** Ex. 1 (Op. Rpt.) ¶ 256-57 ("In my opinion, Android is not a substitute for Java
 21 SE because that Java platform targets a *substantially different market*. To the extent that
 mobile device manufacturers previously licensed Java SE and subsequently chose to use
 Android instead, I believe that it is not because Android merely supplants Java SE.") **and**
 22 *id.* ¶ 142 ("Google's use [of Oracle's APIs] does not supersede Java SE.")
 23 **with** Ex. 24 (Dep.) 125:16-19 ("Q: Okay. So just to be very clear, you did not apply any
 24 economic expertise in evaluating the effect of Android on Java SE 5? A: I think that's a
 reasonable statement.") **and** *id.* at 182:1-10 ("I don't think [harm is] part of my analysis. I
 25 have talked about the four factors of fair use, and *except in the fourth factor*, I'm not sure
 where harm would come into play. But I don't think I have taken a position ... on whether
 26 harm [to Sun or Oracle] has come, in my analysis.").
- 27 • **Compare** Ex. 1 (Op. Rpt.) ¶ 258 ("Even if, counterfactually, Android could have had some
 28 effect on the *potential market for Java*, that effect would have come about as a result of
 Sun/Oracle's own actions ... by releasing the OpenJDK under the GPL-2.0-CE license.")

with Ex. 24 (Dep.) 170:4-11 (“I think the use of OpenJDK today is evidence that Android is using OpenJDK today What might have happened in 2006 is not something that I can kind of – I’m not sure forecast is the right word – is precast. Anyway, *I don’t know whether that use [of OpenJDK] today necessitates that it could have happened then.*”) **and** *id.* at 148:3-4 (“The potential for a market is not something that *I’m an expert opining on*”).

- **Compare** Ex. 1 (Op. Rpt.) ¶ 270 (“There is also evidence that Android positively *affected the market for Java*.... The increase in and continued popularity of the Java programming language is due in large part to the fact that developers can use the Java programming language to write programs for Android.”) **with** Ex. 24 (Dep.) 126:6-9 (“[W]hen I wrote in my reports that maybe more developers would be brought to Java because they were brought to Android, that was not an economic principle.”).

Also, Dr. Astrachan's repeated admissions that he did not apply *any* economic methodology in coming to his economic conclusions further render his opinions inadmissible. An admissible opinion requires (1) "proof that the research and analysis supporting the proffered conclusions have been subjected to normal scientific scrutiny through peer review and publication[,]" or, failing peer review, (2) an "[explanation of] precisely how they went about reaching their conclusions and point[ing] to some objective source—a learned treatise, the policy statement of a professional association, a published article in a reputable scientific journal or the like—to show that they have followed the scientific evidence method, as it is practiced by (at least) a recognized minority of scientists in their field." *Clausen v. M/V NEW CARISSA*, 339 F.3d 1049, 1056 (9th Cir. 2003) (quotation marks omitted).

Dr. Astrachan's economic analysis is the pure speculation of a computer scientist; he relies on *no data* and applies *no accepted methodology*. Ex. 24 (Astrachan Dep.) 125:7-15 ("I did not run any economic models to discuss what the effect [of Android on Java SE] might be I did not apply a set of economic principles from the field of economics other than that of what, you know, an informed citizen in a computer scientist would apply."); *id.* 141:2-142:1 ("I have not done an empirical analysis."). Worse, Dr. Astrachan's factor four *market harm* analysis is based solely on his "general understanding in talking to counsel" and his lay "understanding of the software enterprise and industry." *Id.* 127:8-15. An expert unqualified in the relevant field serving as the mouthpiece for a party's argument under the guise of expertise does not assist the jury and is impermissible. *Sundance, Inc. v. DeMonte Fabric'g, Ltd.*, 550 F.3d 1356, 1364-65

1 (Fed. Cir. 2009) (abuse of discretion to admit expert opinion that “amounts to nothing more than
 2 advocacy from the witness stand”); *Clark v. Takata Corp.*, 192 F.3d 750, 757 (7th Cir. 1999)
 3 (“An expert must substantiate his opinion; providing only an ultimate conclusion with no analysis
 4 is meaningless.” (quotation marks omitted)).

5 Moreover, Dr. Astrachan’s economic opinions are severely uninformed and based on
 6 cherry-picked facts gleaned from “talking to counsel,” Ex. 24 (Astrachan Dep.) 127:8-15. *See In*
 7 *re Bextra & Celebrex Mktg. Sales Pracs. & Prod. Liab. Litig.*, 524 F. Supp. 2d 1166, 1184 (N.D.
 8 Cal. 2007) (excluding expert testimony relying on cherry-picked data). For example, though Dr.
 9 Astrachan opines on market harm, he never reviewed a single license for Java SE in the mobile
 10 space, such as the license to SavaJe, which produced Java SE smartphones, or the license that
 11 Nokia had for Java SE for mobile use. Ex. 24 (Astrachan Dep.) 132:3-8 (“I’m under the assump-
 12 tion that Java – that Sun granted licenses, for example, in this Jasper [SavaJe’s Java SE-based]
 13 phone. But I’m not aware of what that license agreement is, and I have not seen what that license
 14 agreement is.”); *id.* 123:10-14 (“I don’t know what licenses Nokia had for Sun [Java SE].”).

15 Similarly, when it serves his thesis that Java SE has technical flaws, Dr. Astrachan dis-
 16 cusses how Amazon switched from Java SE in Amazon Kindle to Android in the Kindle FireOS.
 17 Ex. 1 (Astrachan Op. Rpt.) ¶¶ 145-47. Yet, when it comes to the market harm in factor four, Dr.
 18 Astrachan ignores—does not even mention—Kindle FireOS, a real-world example of Android
 19 causing market harm to the Java platform by superseding it in the market. *Id.* ¶ 257.

20 Finally, though Dr. Astrachan opines that no market harm to Java occurred because
 21 Google could have used Sun’s open-source OpenJDK version of the Java platform in 2007, *see*
 22 Ex. 1 (Astrachan Op. Rpt.) ¶¶ 258-68, Dr. Astrachan was never informed that Google *considered*
 23 and *rejected* Oracle’s OpenJDK license for business reasons, Astrachan 2d Dep. 169:8-17. With-
 24 out any of the relevant information, Dr. Astrachan’s opinions are unreliable and inadmissible.

25 CONCLUSION

26 For the foregoing reasons, Google should be precluded from presenting evidence or argu-
 27 ment on transformation and commerciality on factor one, and Dr. Astrachan should be precluded
 28 from testifying to the above-referenced opinions on any of the fair use factors.

1 Dated: March 23, 2016

Respectfully submitted,

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